Regional Energy and Trade Laws in South Asia

Volume I

September 2004

Prepared by

Nexant

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USAID SARI/Energy Program

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Acronyms

AC	Alternating Current
ADB	Asian Development Bank
APEC	Asia-Pacific Economic Cooperation
ASEAN	Association of Southeast Asian Nations
CCGT	Combined cycle gas turbine
CERC	Central Electricity Regulatory Agency
DTAA	Double Taxation Agreement
ERRA	Energy Regulators Regional Association
FTA	Free Trade Agreement
GATT	General Agreement on Tariffs and Trade
HVDC	High Voltage Direct Current
IOC	Indian Oil Corporation
ISO	Independent System Operator
LDC	Least developed country
LNG	Liquid natural gas
NTPC	National Thermal Power Corporation
ONGC	Oil and Natural Gas Corporation
PGCIL	Power Grid Corporation of India Ltd.
PTC	Power Trading Corporation of Indian
SAARC	South Asia Association for Regional Cooperation
SAFTA	South Asian Free Trade Agreement
SAPTA	South Asia Preferential Trade Agreement
SARI/Energy	South Asia Regional Initiative on Energy
SASEC	South Asia Subregional Economic Cooperation
SERC	State electricity regulatory agency
TAP	Turkmenistan/Afghanistan Pipeline
TSO	Transmission System Operator
USAID	United States Agency for International Development
WTO	World Trade Organization

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Executive Summary

Currently, interest in and support for promoting regional energy trade in South Asia are considerable. In July 2004, the South Asian Association for Regional Cooperation (SAARC) endorsed the concept of an "Energy Ring" of interconnected energy systems in the region. At a national level, renewed prospects for regional energy trade were achieved over the past year by licensing of electricity traders under India's Electricity Act 2003. These and other market forces created by reforming India's power sector were accompanied by support for implementing the South Asia Preferential Trade Act (SAPTA) to reduce tariffs and eliminate trade barriers over the next several years. While SAPTA can provide specifically for promoting cross-border energy trade by adopting certain provisions included in other regional trade agreements, such as the North American Free Trade Agreement (NAFTA), realizing the full potential of energy trade in South Asia requires all countries in the region to adopt policies, regulations, and rules similar to those being undertaken to create an electricity trading market within India.

This report provides a review and discussion of the issues concerning expansion of the currently limited energy exchange and trading among India, Nepal, and Bhutan. It discusses overcoming barriers to cross-border energy trade and how to address the prerequisites for successfully implementing cross-border pipelines and power grid interconnections. Drawing upon India's recent experience, all countries in the region will need to develop a common market design supported by a policy of open, non-discriminatory access to transmission systems. In addition to a review of SAPTA, examples are provided of agreements that have been used elsewhere to create a market-driven, competitive regional electricity markets. This report is intended to provide a roadmap for expansion beyond the limited cross-border trading now carried out through bilateral contracts with a single government of India agency.

In contrast to the year 2001 when the South Asia Regional Initiative on Energy (SARI/Energy) was first initiated, there is currently considerable interest and support throughout South Asia for promoting regional energy trade. In July 2004, the thirtieth session of a South Asian Association for Regional Cooperation (SAARC) standing committee advocated a project approach and greater cooperation in the energy sector as a means to strengthen and deepen regional cooperation.[1] By establishing a proposed ministerial forum on energy and offering to host a SAARC energy centre, the Pakistan Foreign Secretary restated his endorsement for the concept of a South Asian "Energy Ring", which was approved in January 2004 at the Sixth SAARC Summit in Islamabad. To further promote regional cooperation, the prime ministers of the SARI/Energy countries also agreed at the SAARC Summit to adopt and implement by 2006 a regional preferential trade agreement, the South Asia Preferential Trade Agreement (SAPTA).

The goal of including energy cooperation as a cornerstone of the SAARC Summit was preceded in December 2003 by the Second Meeting of the SAARC Technical Committee on Energy, which issued a 20-Point Dhaka Declaration endorsing many of the regional projects that were previously developed under SARI/Energy, including a regional power grid among India, Bangladesh, Nepal, and Bhutan, and an agenda for 2004 involving energy information exchange, micro-hydro, energy efficiency projects, and policy replication initiatives.

These regional initiatives were foreshadowed by recent policy announcements and legal reforms that have been implemented by India, the region's principal trading partner. Over the past year, the Indian Oil Corporation (IOC), the Oil and Natural Gas Corporation (ONGC), and the National Thermal Power Corporation (NTPC) have supported several joint development projects with Nepal and Sri Lanka in the oil and power sectors. These proposed projects include an oil pipeline between India and Nepal, a natural gas pipeline from Myanmar through Bangladesh to India, a natural gas pipeline from Iran or Turkmenistan through Pakistan to India, and a multi-purpose land bridge connecting India and Sri Lanka that would include a cross-border power line and natural gas pipeline. The major impetus for future regional electricity trade, however, occurred in June 2003 when India enacted its Electricity Act 2003 to institute many reforms to provide open transmission access and licensing power trading. This statutory overhaul of India's power sector provides the region with an example for other countries in the region to develop their own policy and regulatory means for adopting transmission and pipeline access rules and promoting public and private trade and investment in new energy infrastructure. With the power market in India made more competitive by licensing a number of private companies as power traders for inter-state and intra-state trading, there now exists a basis for expanding opportunities for cross-border power trading.

1.1 Objective

Consistent with regional energy initiatives under SAARC and other regional organizations, such as the South Asian Subregional Economic Cooperation (SASEC)[2], the objective of SARI/Energy is to provide technical assistance and support for cross-border projects that

[1] "Stress Laid On SAARC Energy Tie-Up: Standing Committee Meets", Qudssia Aklaque, DAWN, July 19, 2004. Also see "Energy Cooperation to Diffuse, Reduce Regional Tensions in South Asia: Nouraiz" (www.paktribune.com (June 16, 2004).

[2] South Asia Subregional Economic Regional Cooperation (SASEC) is a regional energy program initiated by ADB; see "Co-operation in the Electricity Sector in the SASEC Subregion" (2001).

would integrate the energy networks among neighboring countries in South Asia. By doing so, a regional strategy and regulatory framework can be developed and implemented to enhance energy security, flexibility, and quality of supply and to promote bilateral and energy trade.

A major activity of SARI/Energy involves investigating complementary cross-border energy projects and identifying the critical legal and regulatory factors and issues involved in developing energy infrastructure in South Asia to address the existing imbalance between the location of energy resources and demand centers in South Asia. The objective of this report is to relate cross-border energy projects with other trade initiatives in the region.

South Asia comprises some **20%** of the world's population with India projected to outpace China and become the world's most populous country by year 2050 by growing **50%** in the next 46 years to reach 1.6 billion people.[3] Over the past decade, non-energy trade within South Asia has been limited primarily through bilateral Free Trade Agreements (FTAs) with India. For various political and historical reasons, however, FTAs have been unsuccessful in realizing the potential for regional trade. For example, although the Indo-Lanka FTA is recognized as the most successful within the region, during 1994-2000, only modest bilateral trade has occurred (with an Indian trade surplus of 13:1). Moreover, informal trade has been estimated at **30%** of formal trade[4]. Although recent increases occurred in 2002-03, when Indian exports to Sri Lanka increased **45%** (compared to increases of **38%** and **9%** for Nepal and Bangladesh), bilateral trade with India remains a small share of Sri Lanka's global market. Sri Lanka exports $4.8 billion annually, and its main trading partners are outside South Asia, including the United States ($1.9 billion, or **40%** of exports) Japan, China, Singapore, and Europe. The same situation exists for other trading partners of India within the region. Among South Asian nations, only $6 billion of trade is generated, which is far below the region's potential.

In the light of problems encountered with expanding bilateral trade, the SAARC Summit in January 2004 reached agreement by the seven countries in the region to expand economic cooperation by agreeing on the framework for more fully implementing the regional trade agreement that was executed in 1995. Under the new Framework Agreement, SAPTA would include non-traditional areas and new economic opportunities in the information technology and energy sectors and eliminate trade barriers and reduce tariffs to up to **5%** within the next 7-10 years.[5]

However, before energy trading energy can be implemented on a regional basis, certain prerequisites must be put into place. Like India, each participating country must enact legal and regulatory reform that provide for power trading. In addition, sufficient technical and financial support must be provided for developing and implementing cross-border power grid interconnections and pipelines to transmit energy. Moreover, the participating countries must adopt a common market design that is implemented by creating either a regional power pool or a regional power exchange. Only then can a regional treaty or trade agreement successfully be implemented after harmonizing national grid codes, establishing cross-border tariffs and other surcharges such as royalties and custom duties, and applying existing agreements that avoid double taxation.

[3] Population Reference Bureau, Washington DC (August 17, 2004).

[4] The President of the Karachi Chamber of Commerce in a meeting with the World Bank regarding SAPTA estimated that the volume of informal trade between Pakistan and India has risen to $2 billion annually (Dawn, July 10, 2004).

[5] The initiative to include non-traditional trade such as energy was supported when, in December 2003, the Prime Minister of India urged greater economic cooperation among South Asian countries, citing the prospect of a single currency for the region and, specifically, promoting opportunities for energy trade with Sri Lanka, Bhutan, and Bangladesh.

This report discusses the limitations on carrying out regional energy trade by relating the limitations of bilateral FTAs and SAPTA and providing examples of alternatives based on regional treaties and trade agreements that have been successfully used in other regions to implement regional energy trading schemes. These approaches draw upon exemplary agreements adopted in South Africa and Central America, as well as the January 2004 South East Europe Memorandum of Understanding in which 15 countries agreed to mutually cooperate and overcome the challenges of establishing a regional energy market.

1.2 Background

Increasingly, regional energy cooperation is the preferred forum for instituting energy sector reforms and implementing renovation and modernization and new construction of energy infrastructure, especially cross-border electric power lines and pipelines. To share the associated costs and benefits of the energy security provided from such reforms and infrastructure, countries in various regions throughout the world have collectively organized themselves to adopt a regional approach. In contrast to the limited cross-border power sales involving India, Nepal, and Bhutan, more advanced and innovative regional energy sector cooperation programs have been developed in other regions, including the Association of Southeast Asian Nations (ASEAN) member countries, the Asia-Pacific Economic Cooperation (APEC) countries, Central America, North America (USA, Canada, and Mexico), South Africa (SADC/SAPP), the European Union, and emerging economies in South East Europe.

Since 2001, under the SARI/Energy and other regional energy programs initiated by SAARC and SASEC, it has become increasingly apparent that new energy infrastructure systems in South Asia will enhance the security, flexibility, and quality of energy supply among interconnected economies in the region. Interconnections of energy facilities will promote economic growth and cooperation between exporting and importing economies in the region by providing protection against volatile pricing and supply disruptions in international markets. At the same time, particularly in view of long-standing border disputes that have existed in South Asia since partition, such benefits have been stymied by perceived threats to energy security as interconnected systems could be subject to terrorist attacks, and countries could refuse to maintain energy supplies for political reasons.

Traditionally, importing natural gas has been viewed more favorably than electricity imports because further value can be added to the importing economy, as in the case of the on-going effort to export gas from Bangladesh to India, Nepal, and Bhutan. At the same time, natural gas pipeline interconnections and electricity grid interconnections in South Asia can be designed to complement each other, rather than directly compete. Pipeline and power interconnections, especially involving countries, such as Bangladesh, Bhutan, and Nepal that have access to natural gas and hydropower will increase security of supply, economic efficiency, and environmental benefits in the region. Power grid interconnections will enhance supply reliability, peak load control, and opportunities for capturing economies of scale, and they will reduce greenhouse gas emissions in India and Sri Lanka from fossil fuels, which are often imported and severely impact foreign currency reserves.

1.3 Energy Trading with India

Whether interconnections are power lines or pipelines, in South Asia the primary trading destination is the power sector of India, although more limited power exchanges between other countries in the region would expand access to clean energy sources and provide emergency and back-up power supply.

Despite its successes, India has a deficit in power demand, on an annual average and daily peak basis, in virtually every state.[6] Consequently, the government of India has embarked on an ambitious plan to install generation additions that are targeted for the Tenth Plan (2002-2007) totaling some 41,000 MW (not including 1020 MW Tala Hydro Project and 3100 MW of renewables under the Ministry of Non-conventional Energy Sources). (See Table 1-1.) It remains to be seen, however, whether the Tenth Plan will be fully realized.

Table 1-1: Generation Additions Targeted for the Tenth Plan – 2002-2007

	Project Type						
	Hydro	**Coal**	**Lignite**	**Natural Gas**	**Liquid Fuel**	**Nuclear**	**Total MW**
Central	8,742	11,120	1,170	500	0	1,300	22,832
State	4,481	5,335	325	933	94	0	11,157
Private	1,170	1,853	250	1,884	1,964	0	7,121
Total	14,393	18,308	1,745	3,306	2,058	1,300	41,110
%Share	**35%**	**45%**	**4%**	**8%**	**5%**	**3%**	**100%**

Despite the actual power deficits presently experienced throughout India, the Ministry of Power has recently expressed confidence that its Tenth Plan target of an additional power generation capacity of 41,000 MW will be achieved as 36,000 MW have already been commissioned (including eight private projects that have reached financial closure) and 5,000 MW of projects are in various stages of development. On this basis, the Ministry of Power has indicated that the target for the Eleventh Plan will be 60-65,000 MW.[7] Other future power scenarios are described in "Blueprint for Power Sector Development", prepared by Ministry of Power for the Asian Development Bank (ADB) (2002), and "Report of the Committee on India Vision 2020", Planning Commission of India (December 2002).

Until Electricity Act 2003 was enacted in June 2003, cross-border trading with India was limited because of constraints that limited wheeling and selling power to states within India that were the most deficient in power supply. Moreover, cross-border energy trading was traded only through Power Trading Corporation of Indian (PTC), through bulk power transmission services agreements with one of its original shareholders, Power Grid Corporation of India Ltd. (PGCIL).

The Electricity Act 2003 has opened up energy trading within India by authorizing the Central Electricity Regulatory Agency (CERC) and state electricity regulatory agencies

[6] See the website of the Central Electricity Authority (http://CEA.nic.in), which provides power sector data showing, for example, that for all India (April-June 2004) the peak demand was 85,911 MW and peak met was 76,246 MW, or a deficit of 9,665 MW.

[7] "Govt. Sure of Achieving Power Generation Target", IPPAI (July 29, 2004).

(SERCs) to grant licenses valid for 25 years to any person "to undertake trading in electricity as an electricity trader". Also, in a related order by CERC, PGCIL – as the central transmission utility (CPU) – was ordered to provide open access in transmission and distribution. While PTC remains the designated nodal entity for cross-border trading between India and Nepal, these subsequent regulatory reforms mean that cross-border energy trading in the future can be greatly facilitated by transacting purchases and sales with any of the newly licensed energy traders that also enjoy non-discriminatory open access rights to India's transmission and distribution facilities.

As stated in the SARI/Energy companion report, *India's Electricity Act 2003 – Implications for Regional Electricity Trade*, the Act does not specifically distinguish cross-border trade from inter-state and intra-state trading. This is understandable because regional power trade has been historically limited to small amounts of power exchange between India and Nepal (although in 2005 the Tala Project in Bhutan will provide a significant, albeit subsidized, cross-border power project). However, given the spirit and purpose of the Act, it is only a matter of time before energy traders challenge the exclusivity provided to PTC's nodal agency designation, which was granted prior to the Act's date of effectiveness. As energy trading becomes widespread India, it should be expected that licensed power traders (especially companies with affiliated offshore oil and gas resources) will utilize market forces to expand the opportunities for trading and exchanging power from hydropower and natural gas resources in Nepal, Bhutan, Bangladesh, and Sri Lanka.

1.4 Overcoming Barriers to Power Transfers and Exchange with India

In South Asia, the principal barriers to developing interconnected energy networks are geopolitical and geographic. While not insurmountable, these barriers have been problematic. A realistic and up-to-date understanding is required of the existing bilateral or multi-lateral trade arrangements and the existing limits of economic cooperation among the economies in the region since the principal criterion of market success is the delivered price of the energy commodity to established and future markets.

Despite the political barriers that persist in the region from unresolved problems caused by partition,[8] the proximity of the energy resource to demand centers and the geography of the intervening terrain are the key factors in determining interconnection decisions. The infrastructure cost/km is the single most important factor in determining viability. It must be addressed before considering other important factors, such as relative wealth, level of

[8] A review of political barriers is outside the scope of this report. A discussion of such barriers, however, is provided in Energy Crisis and Subregional Cooperation, Anasua Ray Chaudhury (RCSS Policy Studies 13, Parts 1-4), including:

"The history of the Indian subcontinent after de-colonization is a history that partition creates. The partition of the subcontinent in 1947 and again in 1971 left a fractured South Asian psyche, and led virtually to mutual animosity, misperception and misunderstanding among the people, particularly among the states of the region. The people on the other side of the border are considered usually to be the enemy of the first order. Over the years, the statecraft of South Asia manipulated this situation in favor of certain groups of people in power and, up to an extent, the mental gap between the people living in the region only widened … However, if one looks at the poverty-stricken people in the region, one can easily identify that there are several common problems shared perhaps unconsciously by the residents of a geographically contiguous zone, separated by political boundaries. It has been pointed out by different experts at different times that there are some problems faced by the members of the contemporary societies across the globe which cannot be efficiently dealt with by the existing nation-state system alone. In other words, along with the state system, there may be a requirement for transnational initiatives, which can try to solve some of the present-day problems of human society."

industrialization and density of markets, technical barriers, investor confidence, and the ability to pay, especially meeting foreign exchange requirements.

In overcoming barriers to regional energy trade in South Asia, a number of issues need particular attention:

- Although some power interconnections may be designed only to import power during periods of high demand or local disruption, the full economic and environmental benefits are realized where there is a daily two-way flow of electricity to meet varying peak load demands in each economy.
- To meet demand for natural gas, the price of gas is being forced up by competing sources of demand, causing new exploration activities to be financed and raising whether plans for extending pipelines into a regional network should be promoted.
- The power sector is the key market for natural gas, as investors in gas pipelines need large-scale power generation markets to justify costs. Where available, because of its cost competitiveness and relatively low pollutant emission levels, natural gas has been replacing fuel oil and coal as a favored fuel for power generation, especially with development of thermal efficiency with combined cycle gas turbine (CCGT) technology. Such plants are less capital-intensive, can be constructed in less time, require less land, and have operational advantages, such as short start-up time and low cooling water requirements. Once power customers are secured, other industries that use gas as feedstock (e.g., fertilizer plants) or fuel (e.g., cement plants, transport) can be signed up, followed by commercial and residential consumers.

1.4.1 Present Lack of Interconnected Energy Systems in South Asia

In South Asia, in addition to the geopolitical obstacles involving territorial disputes and cultural/religious conflicts, regional energy trade must confront two existing realities:

- There is a disparity between the location of energy resources and demand centers in South Asia.
- No major trans-border power transmission links and natural gas pipelines presently exist in South Asia.

1.5 Prerequisites For Cross-Border Electricity Trade

Compared To other types of trade, the characteristics of electricity require addressing certain prerequisites that are peculiar to trading energy products by entities and companies that specialize in this particular type of trade activity. As related in a 1995 World Bank report on international power trade:

International electricity markets are complex, and experience with them is limited. Purely physical exchange between countries already occurs where interconnection lines are in place. But trade requires more sophisticated organizational structures and coordination. Harmonizing national organizational structures is a first step toward the freer flow of power across borders. Unbundling national power sectors could help further in breaking bottlenecks, particularly in transmission. But coordination needs much attention. Here the key issue for policymakers is this: What terms and conditions are needed to establish competitive regional

electricity trade in which buyers and sellers can, at any time and regardless of their locations, negotiate power and energy contracts covering a wide spectrum of commercial products?[9]

Hence, electricity trade involves satisfying certain basic prerequisites:

- **Need and Willingness**: Unbundling of power sectors throughout the region has allowed private distribution companies and public utilities to look for the cheapest supplies – whatever their national origin. Increased global competition is forcing electric utilities to operate their systems as economically as possible such that national self-sufficiency may be a strategic luxury that few utilities can afford.
- **Technical Means**: Electricity has two specific characteristics: It cannot be stored and it does not allow flow according to the simple laws that apply to fluids and gases. Instead, electricity flows in the path of least resistance, which cannot necessarily be determined by contract. The same holds true during the accidental loss of a means of production. Therefore, correcting the disturbance requires great technical rigor and close cooperation between partners based on instant exchange of information.
- **National Institutions and Regional Operations:** To stimulate electricity trade three factors are critical:

  1. Harmonizing the national power sector structures of each partner country is essential. Harmonized structures are particularly important for pricing systems. In a competitive market, only a pricing system based on bidding is viable because it does not require the publication and verification of detailed economic information. Traditional approaches based on marginal costs, profit-sharing and "avoided" costs cannot work in a competitive environment because economic information will no longer be shared or easily verified.
  2. Establishing a cooperative structure, such as a power exchange or pooling arrangement, between partners is necessary to provide a trading center and to oversee the physical stability of the entire interconnected system. Whether establishing a power exchange, a "tight pool" (countries in the region establishing a common dispatch center), or a "loose pool" (each country having its own dispatch center), a common information center is needed to supply each member with information in real time on supply and demand and transmission constraints.
  3. Establishing transit rights – open access and free transit – is essential in both national and international systems. This requires separating production from transmission so that any buyer can obtain supplies within the interconnected system from any location. It also requires a pricing system that provides the correct signals to both the user and power transmitter, with clearly defined wheeling rights.

Other Issues: In an internationally competitive system, cross-border tariffs must be developed based on market bids because competitors will no longer be willing or able to declare all of their pricing information as they do with other trade products. Similarly, setting transmission tariffs is complex and can be based on transmission capacity, on a lump-sum basis by geographic zone, or average marginal costs plus losses. Further, standardized contracts must be drafted and utilized. For a detailed discussion and specific examples of how these issues can be addressed in South Asia, see related reports prepared by SARI/Energy, including *Power Trading Tool Kit for South Asia* (October 2002), which

[9] "International Power Interconnections – moving from electricity exchange to competitive trade", Industry and Energy Department, World Bank, Public Policy for the Private Sector, Note No. 42 (March 1995). The descriptions for prerequisites for electricity trade are outlined in this World Bank note.

adapts the Master Purchase and Sale Agreement that was developed as an industry standard by power marketers in the United States, and *India's Electricity Act 2003 – Implications for Regional Electricity Trade* (2004), which relates how a common market design, open access, and transmission pricing issues are being addressed and regulated for inter-state and intra-state power trading in India.

1.6 Choosing Energy Infrastructure Projects

As in other regions, cross-border pipelines for oil and gas are needed in South Asia primarily because only limited reserves are closely located close to traditional markets in the region and many gas markets have been constrained by regulatory and institutional factors. New gas reserves are being found but remote fields are often not efficiently exploited for lack of transport infrastructure and near markets. Moreover, cross-border oil and gas pipelines have a history of vulnerability to disruption and of generating conflict due to a variety of reasons, including: Different parties with their own interests are involved; there is no legal regime that can be used to police and regulate activities and contracts; and conflicts invariably arise because of differences regarding sharing of profit and rent among the parties. To minimize conflicts and for cross-border pipelines to succeed, there must be clearly defined and accepted rules for resolving issues and problems with projects driven by commercial, not political, considerations and structured through flexible contracts that provide for a fair allocation of foreseeable risks and mutual sharing of benefits.[10]

Alternatively, long-distance electricity transmission via High Voltage Direct Current (HVDC) has been proven to be capable both technically and economically of meeting the power needs within a region. A comparison between gas transport and electricity generation involving power deliveries between 1,000-5,000 MW over transmission distances of 1,000-5,000 km shows that the cost of electricity generated near gas fields and transmitted by HVDC systems to customers can be achieved at a very attractive cost, especially for primary energy importing countries. Moreover, for shorter distances (300-1,000 km) the use of Alternating Current (AC) transmission systems is an attractive option for a gas pipeline feeding a power plant located into a consumption area.[11]

1.6.1 Advantages of Natural Gas Pipeline Interconnections

Natural gas is relatively clean environmentally and requires minimal processing prior to use. For use in the power sector, natural gas possesses high thermal efficiency. Natural gas pipelines are the only principal infrastructure prerequisite for moving natural gas to markets, although improved and expanded storage facilities provide market centers that benefit by providing such services as temporary gas parking and transportation (wheeling).

In comparison, liquid natural gas (LNG) infrastructure requires, on the supply side, substantial investment in site preparation, harbor/marine facilities, storage tanks, accommodation, gas-processing utilities and, on the demand side, buyers must invest in terminal and re-gasification facilities.

1.6.2 Advantages of Power Grid Interconnections

Power grid interconnections will improve the efficiency of energy resource allocation. If production costs differ between countries, cross-border trade has economic benefits as long

[10] See "Cross-Border Oil and Gas Pipelines: Problems and Prospects, Joint UNDP/World Bank Energy Sector Management Assistance Programme, Professor Paul Stevens, CEPMLP (June 2003).

[11] See "Competitive Electricity Transmission Systems As An Alternative to Pipeline Gas Transport for Electricity Delivery", Clerici and Longhi of ABB S.p.a.

as the price differentials are sufficient to repay the investment and operations and management costs of interconnecting the grids.[12]

As electric power is difficult to store and demand is highly variable, some power generation sources such as hydropower (compared to coal-fired thermal plants) can respond quickly to changes in demand. Hence, interconnection between systems of different technologies will increase flexibility and reduce costs. Additional benefits will also be derived from deferral of new plant investment – interconnection of national grids will allow excess capacity (for reserve plant margin and unforeseen plant outages) to be shared, reducing total capital requirements. Economic benefits also arise from the greater competition between suppliers and less dependency on a given supplier in a larger interconnection network.

At the same time, under deregulation and privatization, industry convergence trends have led to a significant degree of consolidation of ownership in energy network assets where companies supply and market both electricity and gas.

1.6.3 Potential Regional Power Grid and Natural Gas Pipeline Interconnections in South Asia

When only considering the geographical proximity of energy resources and markets in South Asia, the potential of cross-border power interconnections and pipelines become readily apparent. To overcome barriers and realize the benefits of a regional energy interconnected system, however, cross-border projects must:

- Identify and quantify mutual benefits from cross-border interconnections;
- Determine how and when geopolitical issues can be resolved;
- Identify and replicate laws and regulations that harmonize cross-border energy trade, pricing and contracts. (For example, a transmission protocol needs to be established, supported by open access rules and transparent tariff systems for production, transmission and distribution.)

Despite the current absence of cross-border energy infrastructure in South Asia, the potential for regional energy trade exists if supported by state-owned energy companies and development funding and if capital investment is provided by the private sector.

1.6.4 Gas Pipeline Projects

Two principal cross-border gas pipeline projects have been promoted in the region:[13]

- **Bangladesh-India**: For the past five years, there has been a major controversy regarding proposed plans to export gas from Bangladesh to India by Unocal. Although ADB has supported limited gas exports, as a means for Bangladesh to generate much needed foreign revenue, the government of Bangladesh has consistently taken the political position that there are insufficient amounts of proven gas reserves to meet domestic needs. Unocal has since dropped its plan to build the pipeline but the debate regarding sufficiency of gas reserves for domestic use versus export continues.

[12] As otherwise stated herein, the principal benefits typically associated with cross-border energy interconnections include: (i) emergency support; (ii) savings on operating costs as a result of the structural differences of load profiles, and (iii) savings in investment (and operating) costs from complementary means of production.

[13] Not discussed here is the planned oil pipeline by IOC for non-power energy requirements connecting India and Nepal and the recently proposed pipeline involving the ASEAN region crossing Bangladesh from Myanmar to India.

- **Iran/Turkmenistan-Pakistan-India:** Over the past decade, various proposed pipeline proposals have been promoted, originating either from Iran or from Turkmenistan/Afghanistan passing through Pakistan to India. To facilitate financing the project, in view of the on-going dispute between Pakistan and India over Kashmir and the accompanying threat of pipeline sabotage, ADB has arranged political risk insurance to mitigate project risks. However, in July 2004, as a consequence of progress made at the 12th SAARC Summit in Islamabad, there has been revived interest to advance the pipeline route from Iran.[14] Nonetheless, considerable uncertainty remains and ADB recently announced it would consider a pipeline from Turkmenistan and Afghanistan to Pakistan without the participation of India. The Turkmenistan/Afghanistan Pipeline (TAP) is being proposed as a US$ 3.3 billion project 1,700 km in length, originating from the Daultabad fields in Southeast Turkmenistan and supplying up to 30 billion cubic meters annually to consumers in Afghanistan, Pakistan, and, if it agrees, India.[15] This comes at a time when Pakistan has announced plans to double its oil and gas production over the coming decade (claiming oil potential of 27 billion barrels and potential gas reserves at 282 trillion cubic feet, far beyond the 43 trillion in discovered gas reserves).[16]

1.6.5 Cross-Border Power Interconnections

Of the four principal cross-border power interconnection in the region, one project is completing construction and four are conceptual projects in the prefeasibility stage:

- **Bhutan-India**: In 1997 work began on the Tala hydroelectric power project, a run-of-the-river project located in South-Central Bhutan, which is expected to become commercially operational in early 2006. The Rs. 3,580 crore facility (funded by a **60%** grant, **40%** loan from India) would generate 1,020 MW, most of which will be exported to India through a new transmission line from Tala to India's Siliguri substation. Although the tariff is still being negotiated, revenues are expected to increase Bhutan's per capita income from $700 to $1,200.[17]
- **India-Nepal-Bhutan-Bangladesh**: In October 2001, SARI/Energy prepared a draft pre-feasibility report, The Four Borders Project: Reliability Improvement and Power Transfer in South Asia. The principal conclusions of the draft report are summarized here. The report found three technically viable options for the interconnection that would provide for multilateral power exchange include locating the interconnection in India at either the Siliguri (West Bengal) or Purnea (Bihar) substations without using land in the constrained "chicken-neck" region of northeastern India. These three options are:

  Option A: Limited Power Transfer – based on a 132 kV system;
  Option B: Moderate Power Transfer with Accelerated Development – based on developing a 220 kV system in advance of the system developments in Nepal and Bangladesh; and
  Option C: Moderate Power Transfer with Phased Development – based on developing a 132 kV system initially, which would be upgraded to a 220 kV system in conjunction with power sector developments in Bangladesh and Nepal.

[14] The Pakistan oil minister asked his Indian counterpart to support an informal suggestion advanced by Iran for all three countries to agree to a "conversation without commitment" among the three oil ministers. See "Pipeline Through Pakistan Crucial: Mani Shankar", Daily Pakistan Times, July 19, 2004.
[15] "ADB Mulls Various Options: India's Participation Doubtful in Gas Plan", Daily Pakistan Times, August 3, 2004.
[16] See "Oil, Gas Production in Pakistan to be Doubled in 10 Years", Daily Pakistan Times, July 29, 2004.
[17] See "Power-Packed Punch to Indo-Bhutan Ties", The Indian Express, August 3, 2004.

- The phased approach to developing the proposed Four Borders Project described in Option C best serves as the basis for establishing regional power transfer and trade and is the preferred option.
- Transfer of surplus power available from hydropower plants in Nepal and Bhutan through this interconnection can help reduce power deficits in India and Bangladesh.
- Preliminary power flow analysis indicates that the proposed interconnection would improve system stability and reduce transmission system losses in the region by about 90 MW.
- The options would permit the transfer of power from 50 MW up to approximately 500 MW.
- Investment requirements for these options would be minimal, ranging from approximately $9 million to $52 million.
- Estimated levelized transmission costs for the alternatives range from 2.6 cents per kWh for power transfers of 50 MW to 0.2 cents per kWh for transfers of 500 MW.
- All of the options analyzed have positive rates of return, which increase significantly with the level of power transfer.
- The options reviewed in the *Four Border Project* report could be implemented within the 2005-2010 time period.
- All of the options have minimal environmental impacts, as they rely extensively on existing facilities.

- **India-Bangladesh:** In September 2000, a prefeasibility report prepared by Nexant for the United States Agency for International Development (USAID) and the Government of Bangladesh, *Viability of Power Exports from Bangladesh to Indi*a that concluded exports of up to 400 MW of power to India via the Eastern Grid of India by the year 2005 are technically feasible (within existing and planned transmission infrastructure). In a recent update of this report was prepared under SARI/Energy, it was determined that there are multiple options for connecting the power grids of India and Bangladesh. Interconnections at multiple points in the east, west and north of Bangladesh with substations located in Tripura, Mizoram, West Bengal, Assam and Meghalaya in India would have various positive impacts, including reduction in T&D losses and tariff, improving the reliability of supply and grid stabilization. The existing grid substations in the vicinity of the India-Bangladesh border, which have the possibility of interconnection with the growth and development on both sides, are identified in the following table:

Table 1-2: Potential Grid Interconnection Points Between Bangladesh & India

Sub-Station (Bangladesh)	Sub-Station (India)	Indian border state/Bangladesh region	Distance & voltage level	Interconnection cost(US$ Million)
Ashuganj	Agartala	Tripura- Eastern Bangladesh	(50 kms) at 220KV at 132KV	 2.19 1.32
Ishurdi	Gokarna	West Bengal- Western Bangladesh	(100 kms) at 220KV	 4.39
Sreemongal	Kumarghat	Tripura- Eastern Bangladesh	(50 kms) at 132 KV	 1.32
Rangpur	Malda	West Bengal- Northern Bangladesh	(120 kms) at 132KV at 220KV	 3.16 5.27
Thakurgaon	Japlaiguri/Sil i-guri	Assam Northern Bangladesh	(80 kms) at 132KV	 2.11
Ishurdi	Krishnanagar	West Bengal Western Bangladesh	(90 kms) at 220KV	 3.95
Chattak	Cherrapunji	Meghalaya Northeast Bangladesh	(50 kms) at 132KV	 1.32

- **India-Sri Lanka:** In December 2003, Nexant prepared a three-volume prefeasibility *The Indo-Lanka Regional Trade Project: Multi-Purpose Bridge.* This report concluded that a multi-purpose land bridge connecting India and Sri Lanka should be established to provide infrastructure needed to support the peace initiative and economic recovery of Sri Lanka. The land bridge would accommodate a railway track, roadway, power transmission line, telecommunication line, and gas pipeline to foster growth of trade, tourism, and cultural integration. The report concluded that:
  - Natural gas could be provided to the associated power plant in Sri Lanka via a pipeline over the multi-purpose land bridge at a price in Sri Lanka that is competitive with diesel fuel. The pipeline would provide US$1 million of annual revenue to the multi-purpose land bridge project.
  - An electricity transmission line also would be placed on the multi-purpose land bridge to transmit power from the associated power plant in Sri Lanka to Tamil Nadu. It is estimated that the delivered price for this power in Tamil Nadu would be approximately $0.064/kWh and the transmission line would contribute average annual revenue to the multi-purpose project of approximately $22.6 million.
- **India-Pakistan:** Recent progress between India and Pakistan over the Kashmir issue has re-kindled cross-border power projects to import electricity from Pakistan to India that have been proposed since 1998. As related in a landmark paper promoting regional energy trade in South Asia:[18]:

  It is stated that each country will construct and maintain a double circuit twin-bundled 220 KV transmission from the designated substations viz., Dinanath in Pakistan and Patti in India … (t)here is a proposal of laying a 50 km high voltage double circuit (HVDC) transmission line to evacuate power from the Dinnath sub-

[18] *Pipelines and Powergrids for Peace*, Mahendra P. Lama and Rasul Bakhsh Rais, International Centre for Peace Initiatives, Mumbai, 2001.

station near Lahore to the Patti sub-station in Indian Punjab. If this happens, it is likely to bring about a major transformation in the political economy of regional cooperation in South Asia.

1.7 The Need for Open Access and Common Market Design

Substantial progress has been made within the past year by India, the region's major trading partner, toward implementing the various proposals for cross-border power interconnections. The enactment of the Electricity Act 2003 in June and the subsequent orders issued by India's national power regulator, CERC, are important first steps in addressing the prerequisites of power trade.[19] In further support of implementing India's Electricity Act 2003, the government also established a Task Force on Power Sector Investments and Reforms to, among other duties, "analyze the existing investment climate in the power sector and suggest measures for promoting and facilitating private investments, both domestic and foreign, in all segments of the power industry." As detailed in the Task Force Report (Volume I, February 2004), for energy trading to effectively develop within India there must be open access to transmission services and a common power market design.[20] These prerequisites apply equally to cross-border power trade.

1.7.1 Open Access to Transmission Services

A robust transmission network is essential for power market operations such that market reforms should start with transmission and not generation. "Commercial autonomy to sell and trade power may not achieve desired results if transmission networks do not have adequate capacity," stated the Task Force Report. To meet the needs of cross-border power trade, as is the case with all new power markets, the adequacy and open access of transmission facilities is critical for market efficiency. By ensuring open access, a competitive environment is created that allows generators and traders to choose their customers, and vice versa.[21] To facilitate such transactions, the India Electricity Act 2003 provides that:

- Distribution companies can access power from any source (a generator, a captive generator, a trader another distribution company) with payment of transmission wheeling charges (but without payment of an additional surcharge);
- A captive generating plant can carry power from its generating facility to the destination of its use without payment of an additional surcharge; and
- Any consumer can access a trader, generator, distribution licensee other than his own, on payment of wheeling charges and a surcharge to cover the current level of subsidy.

To realize the potential of regional power trade, India should extend the principles of open access and licensing of power traders to cross-border trading, and each trading country in the region should develop and enact similar open access rules consistent with their regulatory regimes that draws upon India's experience in structuring policy guidelines regarding

[19] See "India's Electricity Act, 2003 – Implications for Regional Electricity Trade", SARI/ENERGY (2004).

[20] "Common market design" for power markets is also referred to in other countries, including the U.S., as "standard market design".

[21] Under the definitions section 1(47) of India's Electricity Act 2003, "open access" means the non-discriminatory provision use of transmission line or distribution system or associated facilities with such line or system by any licensee or consumer or a person engaged in generation. In section 1(36) "inter-state transmission" includes (i) any system for conveyance of electricity by means of main transmission line from the territory of one State to another State; (ii) the conveyance of electricity across the territory of an intervening State as well as conveyance within the State which is incidental to such inter-state transmission of electricity; and (iii) the transmission of electricity within a State on a system built, owned, operated maintained or controlled by CTU."

network planning, investment, and access issues and pricing issues.[22] A common regulatory framework involving trading countries in the region needs to be formulated for determining the structure and level for network charges and common operational rules of transmission system operators, such as requisite metering and communication arrangements, revised technical codes for interconnection, and grid codes for power scheduling and dispatch.

1.7.2 Common Power Market Design

The Task Force recommended that, in conjunction with open access, India should develop a common power market design for a competitive power market to exist. For cross-border power trading to be competitive and to ensure the harmonious operation of cross-border power markets, a common market design must be developed and applied on a regional basis as well:

"A common power market design comprises a core and common set of philosophies translated to standard rules, procedures and products designed to create a seamless transmission system across multiple wholesale and retail markets and different regulatory jurisdictions across the states. This design must facilitate implementation and must promote reliability, enhance efficiency and offer non-discriminatory access, whilst making access more transparent by offering common standards and validation."[23]

Similarly, for cross-border power trading to be extended on a regional basis, a common set of rules and procedures for governing wholesale energy markets must first be developed that facilitates implementation in multiple markets across different countries, ultimately leading to seamless wholesale power markets across the region.

22 Outside the scope of this report is the whole question regarding how to develop a cross-border tariff. The existing transactions negotiated by PTC through bilateral PPAs have involved hydro projects in Nepal and Bhutan that have been heavily subsidized by India. However, the 750 MW West Seti Hydropower project in Nepal does provide an example of a tariff ostensibly negotiated on a commercial basis. In December 2003 PTC announced agreement of a 30-year PPA at the rate of Rs. 3.60, with **10 %** of the power apportioned for free to Nepal and payment of a royalty of 2.5 percent (Kantipur Online, Dec. 11, 2003).

23 Report of the Task Force on Power Sector Investments and Reforms (Volume I – February 2004) at 253.

Section 2 Cross-Border Power Markets and Existing Trade Laws

2.1 Reconciling Power Markets with Trade Laws

Until power markets in the region are developed and structured further along the lines outlined in this report, reconciling cross-border power trading in South Asia with existing national and regional laws regulating markets and trade will be problematic. As demonstrated by the Task Force, this can be related by examining the existing definition of "*market*" under India's Competition Act, which – as the case with trade laws – is defined based on the product and geographical characteristics:

> (q) "Relevant market" means the market which may be determined by the Commission with reference to the relevant product market or the relevant geographic market or with reference to both the markets; (r) "relevant geographic market"' means a market comprising the area in which the conditions of competition for supply of goods or provision of services or demand of goods or services are distinctly homogenous and can be distinguished from the conditions prevailing in the neighboring areas; (s) "relevant product market" means a market comprising all those products or services which are regarded as interchangeable or substitutable by the consumer, by reason of characteristics of the products or services/ their prices and intended use.

As recognized by the Task Force, the drawback with this definition of market and with the definitions of bilateral and regional trade laws is that they are amenable to commodities and electricity is yet to be regarded as a commodity in India or other countries in South Asia:

> "While internationally, electricity trading is facilitated through organized power exchanges (akin to commodity exchanges) with 20-40 products (products here are both physical as well as financial). Electricity in different time periods within a day is considered to be different product because of its different cost and tariff characteristics), electricity tariffs in India, at present, are not significantly time-differentiated at the wholesale or retail level."[24]

Due to the characteristics of electricity, which necessitates real-time matching of demand and supply, pooling of power is critical for efficient operations. Consequently, for India to develop power markets the Task Force concluded:

> "Experiences in other countries show that the efficiency of pooling and load aggregation can be provided by instituting energy exchanges, which create anonymity between traders or buyers and undertake risk management functions on behalf of market participants … power exchanges, as institutions, are able to pool risks and create liquidity (through physical and financial products), thereby limiting the adverse exposure to traders within reasonable limits. In addition, such institutions facilitate efficient clearing and settlements in cooperation with the system operator."[25]

Hence, given that a power exchange requires significant refinements in regulatory, commercial, and operational arrangements, a principal recommendation of the Task Force that is equally applicable to developing a regional power trading market included: *An overall power market design guideline, including the creation of suitable Power Exchange, would be*

[24] Report of the Task Force on Power Sector Investments and Reforms (Volume I – February 2004) at 256.
[25] Ibid at 263.

developed by Government of India within one year in consultation with all concerned after taking into account relevant experience."[26]

2.2 Existing Treaties and Agreements with India

Most agreements among countries in South Asia are bilateral, rather than regional. The website of India's Ministry of External Affairs[27] provides a partial listing of India's bilateral agreements, including agreements related to power, trade, and taxation. These bilateral agreements with Bangladesh, Bhutan, Nepal, Sri Lanka, and the Maldives are listed below.

Bangladesh

- Double Taxation Agreement (DTAA) between India and Bangladesh (9 August 1992);
- Agreement Between the Government of India and Government of the Government of the People's Republic of Bangladesh for the Supply of Crude Oil (16 May 1972);
- Trade Agreement Between India and Bangladesh (10 April 1980);

Bhutan

- Agreement Between the Government of India and the Royal Government of Bhutan Regarding the Chukha Hydro-Electric Project (23 March 1972);
- Agreement Between the Government of India and the Royal Government of Bhutan Regarding Trade and Commerce (17 January 1972);
- Agreements on Trade and Commerce Between the Government of India and the Royal Government of Bhutan (2 March 1973 and 5 April 1973);

Nepal

- Agreement Between the Government of India and His Majesty's Government of Nepal Regarding Economic Cooperation (5 March 1973);
- Agreement Between His Majesty's Government of Nepal and the Government of India Concerning the Construction of Trisuli Hydro-Electric Project (20 November 1958);
- Double Taxation Avoidance Agreement Between the Republic Of India and the Republic of Nepal (18 January 1987);
- Treaty of Trade Between the Government of India and His Majesty's Government of Nepal (6 March 2002);
- Treaty of Trade and Transit Between the Government of India and His Majesty's Government of Nepal (11 September 1960 and 13 August 1971);
- Treaty of Trade and Commerce Between the Governments of India and Nepal;
- Revised Agreement between His Majesty's Government of Nepal and the Government of India on the Kosi Project, H.M.G. Ministry of Water and Power, 1975
- Agreement between His Majesty's Government of Nepal and the Government of India Concerning the Electric Power Trade, June 1997
- Treaty between His Majesty's Government of Nepal and the Government of India Concerning the Integrated Development of the Mahkali Rover Including Sarada Barrage, Tanakpur Barrage and Pancheshwar Project, February 1996

[26] Ibid at 44.
[27] See http://meaindia.nic.in

Sri Lanka

- Convention Between the Government of the Republic of India and the Government of the Democratic Socialist Republic of Sri Lanka for the Avoidance of Double Taxation and the Prevention of Fiscal Evasion With Respect to Taxes on Income and Capital (10 September 1956 and 6 February 1957 and 19 April 1983);
- Free Trade Agreement Between the Republic of India and the Democratic Socialist Republic of Sri Lanka (28 December 1998);
- Trade Agreement Between the Government of India and the Government of Ceylon (28 October 1961);

Maldives

- Trade Agreement Between the Government of the Republic of India and the Government of the Republic of Maldives (31 March 1981);

Within South Asia and similar to other regions, the most recent trade agreements have involved debates regarding implementation of bilateral FTAs.[28] The most notable is the FTA executed by India and Sri Lanka in March 2000 (although signed in December 1998, the annexes were not finalized until February 2000). The principal features of this FTA include:

1. Establishing a Free Trade Area through complete or phased elimination of tariffs – all tariffs on all goods are not removed at once. For example, duty free access by India was granted for 1,351 items and Sri Lanka granted duty free access for 319 items. India extends a **25%** tariff reduction for 528 textile items, a **50%** fixed tariff concession for imports of tea and garments from Sri Lanka (subject to maximum annual quotas), and a **50%** reduction for 2,799 items (phased over 3 years). Sri Lanka extends a **50%** tariff reduction for 889 items (also phased over 3 years) and removes. Removal of tariffs for another 2,724 items is phased within 8 years.
2. Negative Lists protect interests of the countries by exempting certain goods. India has 429 items in its Negative List. Sri Lanka has 1,180 items on its Negative List.
3. Rules of Origin criteria are established that ensure a minimum local content.
4. Mechanisms are provided to implement the FTA over time.

Controversies with implementing FTAs in South Asia involve the concurrent lack of internal trade reforms and the failure of FTAs to correct the trade imbalance within the region. Within the SAARC region, India has an **80%** share of all trade, or about US$6.2 billion annually, and Pakistan, the next largest trading country, has only US$510 million. Without reasonably level playing fields being provided to smaller countries like Bangladesh, Nepal, and Bhutan, FTAs are viewed as a cause of trade distortions and imbalances within the region.[29] Free trade is based on principles of reciprocity, openness, and willingness to trade. Unless concessions are provided to India's smaller trading partners in the region, the future role of FTAs is uncertain.

2.3 South Asia Preferential Trading Agreement (SAPTA)

In view of the continued inability to resolve trade imbalances within the region through bilateral trade agreements, a major outcome of the Twelfth SAARC Summit in January 2004

[28] India, Sri Lanka, Bangladesh, and Nepal have all proposed or executed FTAs within South Asia and outside the region, such as India's recent FTAs with Thailand and Singapore.

[29] See "India-Bangladesh Free Trade Agreement - Latest Development" outlining that Bangladesh has set four preconditions for special and preferential treatment in opening negotiations with India (www.matamat.com July 22).

was the signing of the Framework Agreement for SAPTA[30]. As stated in the Summit's Islamabad Declaration, SAPTA was proclaimed as a major milestone because "it is important to maintain this momentum and move towards broadening of economic cooperation and to ensure equitable distribution of benefits of trade and cater to the special needs of the small and LDC [least developed country] member states by providing them special and deferential treatment."

SAPTA has a long history.[31] In December 1991, the Sixth SAARC Summit agreed to establish SAPTA by 1997, which was made operational by 1993. Three rounds of trade negotiations followed. In SAPTA-I, trade concessions were offered to 226 commodities by all countries. In SAPTA-II, trade concessions were offered to an additional 1,868 products. This was followed by SAPTA-III, which offered 3,456 commodities. The Tenth SAARC Summit in 1998 decided to accelerate the next round of negotiations so that the fourth round of negotiations are conducted on a sectoral or across-the-board basis, rather than product-by-product. Annex 3 is a copy of SAPTA (see footnote 21; the SAARC website which provides downloadable copies of the SAPTA Consolidated National Schedules of Concessions that have been granted by for each country in the region, which have emerged from the four rounds of discussions completed to date).

The principles of SAPTA include:

- Overall reciprocity and mutuality of advantages;
- Step-by-step negotiations and periodic review so as to improve the preferential trade arrangement in stages;
- Inclusion of all products, raw, semi-processed, and processed; and
- Special and favorable treatment for Least Developed Countries (Bangladesh, Bhutan, Maldives and Nepal).

As related by SAARC, SAPTA was seen as the first step toward a South Asian Free Trade Agreement (SAFTA) and, subsequently, toward a Customs Union, Common Market, and Economic Union. At the same time, SAPTA was never the only means for developing regional economic cooperation, even through SAARC. For example, a separate plan to improve transport infrastructure and transit facilities was undertaken at the 11th SAARC Council of Ministers meeting in 1992 and, more recently, a Regional Investment Agreement and a Regional Agreement for the Avoidance of Double Taxation are under consideration.

The elements of SAPTA are provided in the Terms of Reference of the SAARC Committee of Experts charged in 1998 with drafting a regulatory framework by 2001 that is consistent with World Trade Organization (WTO) Agreements and provides:

- Schemes for reducing and phasing-out tariffs and tariff barriers to free trade such as trade distorting subsidies and incentives;
- Safeguards to domestic industry affected by free and unrestricted trade;
- Rules of Origin for products to qualify for preferential market access, recognizing the right to apply domestic legislation for safeguards regarding anti-dumping, anti-subsidy, and countervailing duties measures;

[30] Opposition in implementing SAPTA was associated with Pakistan and Bangladesh, but the present limits on trade within the region provided the impetus of agreement. See "FICCI Hopeful Roadblocks to SAFTA Will Be Cleared" (The Hindu, December 31, 2003) , which states "at present, intra-regional exports for SAARC is a meager 5.3 per cent as against 51.7 per cent of NAFTA, 55.2 per cent of EU and 20.4 per cent of ASEAN."

[31] See the "Economic Cooperation" section of the SAARC website: www.saarc-sec.org

- Expansion of intra-regional trade by removing existing infrastructural bottlenecks (transportation, communication, and information);
- Harmonized rules, procedures, classifications and documentation regarding banking facilitation, insurance, port and transport facilities, taxation, and other trade impediments;
- Mechanisms to promote trade and provide compensation for revenue loss due to elimination of tariffs; and
- Mechanisms for monitoring, review mechanisms and dispute resolution for implementing SAPTA.

In view of the protracted process of developing and implementing SAPTA,[32] the absence of a common market design for electricity trading within India and other countries in the region and the lack of existing infrastructure within the region for trading energy as a commodity, SAPTA cannot be the primary mechanism for promoting and implementing regional energy trade.[33] Instead, as provided in Section 3 of this report, regional agreements such as a treaty, joint declaration, or memoranda of understanding (supported by rules and guidelines) that have been used in other regions provide exemplary approaches for an organizational framework and implementation agreements for cross-border power trading involving interconnecting national power grid systems in South Asia.

Nonetheless, since SAPTA is not expected to be implemented until year 2007, concurrent with fulfilling the prerequisites for implementing cross-border power trade, SAPTA could be amended to include a provision that endorses power trade as a regional policy and extends tax emption and trade restrictions to energy, similar to other regional trade agreements such as the North American Free Trade Agreement (NAFTA).[34]

2.3.1 Model Free Trade Agreement for Energy

The following is an abstract of the energy provisions of NAFTA's Chapter on Energy (references to petrochemicals are excluded) substituting terms used in SAPTA, to provide an example of how SAPTA could be amended to address energy trade.[35]

[32] Unresolved issues include non-agreement regarding flexibility for LDCs regarding a 20% of tariffs on the "sensitivity list". See "SAFTA in Turbulence", Bhaskar Sharma, The Kathmandu Post (6/22/4). Difficulties in reaching a common agenda under SAPTA include: (i) varying interests and priorities of the WTO members and non-members, (ii) varying interests of the 3 developing countries and the fours less developed countries of SAARC; (iii) divergent emphasis on sector—specific provisions and negotiations; and (iv) disagreement among countries in accepting reciprocal agreements. See "WTO Negotiations and Implications for Sub-Regional Cooperation in South Asia", Mr. Debapriya Bhattacharya, Center for Policy Dialogue, Bangladesh (FICCI South Asia Business Forum, August 2002).

[33] This is not to say that SAPTA should not recognize regional energy trade. Like NAFTA, a general policy endorsement for trade of electricity and petroleum products can be recognized by SAPTA for implementation outside the agreement.

[34] The difficulty in looking to other regional trade agreements is that they may not have been more successful in resolving controversies that have been stalling implementation of SAPTA, such as the ability to correct trade imbalances between India and the LDCs in the region. Fore example, NAFTA should provide some constructive lessons to apply to SAPTA since NAFTA involved an agreement among countries of radically different degrees of development. After ten years of experience, however, NAFTA still has it vocal critics because – besides cutting tariffs and lifting quotas on trade in goods between countries, NAFTA required each country to conform all of its applicable domestic laws regardless of whether voters had previously rejected such rules as it relates to domestic regulation.

[35] Even if SAPTA was to be amended to include trade provisions relating to energy, this is not a substitute for the types of separate agreements provided in Section 3 of this report. For example, despite NAFTA's provision for cross-border power trade, power exports from the U.S. to Mexico were governed by the authority of the U.S. Federal Power Act, the regulatory oversight of the Federal Energy Regulatory Agency and required the transaction to be implemented through a state power exchange. See California Power Exchange Corporation Order No. EA-179A at http://www.fe.doe.gov/coal_power/elec_reg/orders.

Chapter X – Energy

Article 1: Principles

1. The Contracting States recognize that it is desirable to strengthen the important role that trade in energy goods plays in the free trade area and to enhance this role through sustained and gradual liberalization.

2. The Contracting States recognize the importance of having viable and an internationally competitive energy sector to further their national interests.

Article 2: Scope and Coverage

1. This Chapter applies to measures relating to energy originating in the countries of the Contracting States and to measures relating to investment and to cross-border trade in services associated with such energy.

2. Direct trade measures involving energy and related trade activities shall be governed by this Agreement.

Article 3: Import and Export Restrictions

1. Subject to the further rights and obligations of this Agreement, the Parties incorporate the provisions of the General Agreement on Tariffs and Trade (GATT), with respect to prohibitions or restrictions on trade in energy. The Contracting States agree that this language does not incorporate their respective protocols of provisional application to the GATT.

2. The Contracting States understand that the provisions of the GATT incorporated in paragraph 1 prohibit, in any circumstances in which any other form of quantitative restriction is prohibited, minimum or maximum export price requirements and, except as permitted in countervailing and anti-dumping orders and undertakings, minimum or maximum import price requirements.

3. In circumstances where a Contracting State adopts or maintains a restriction on importation from or exportation to a non-Contracting State of energy, nothing in this Agreement shall be construed to prevent the Contracting State from:

   i. Limiting or prohibiting the importation from any Contracting State of such energy of the Non-Contracting State; or

   ii. Requiring as a condition of export of such energy of the Contracting State to any other Contracting State that the energy be consumed by the other Contracting State.

4. In the event that a Contracting State adopts or maintains a restriction on imports of energy from non-Contracting States, the Contracting States, on request of any Contracting State, shall consult with a view to avoiding undue interference with or distortion of pricing, marketing and distribution arrangements in another Contracting State.

5. Each Contracting State may administer a system of import and export licensing for energy provided that such system is operated in a manner consistent with the provisions of this Agreement.

Article 4: Export Taxes

No Contracting State may adopt or maintain any duty, tax or other charge on the export of any energy to another Contracting State unless such duty, tax or charge is adopted or maintained on: (a) exports of any such energy to all other Contracting Parties, and (ii) any such energy when destined for domestic consumption.

Article 5: Other Export Measures

A Contracting State may adopt or maintain a restriction otherwise justified under Article XI:2:2(a) or XX(g), (i) or (j) of the GATT with respect to the export of energy to another Contracting State if:

(i) the restriction does not reduce the proportion of the total export of the energy made available to the other Contracting State relative to the total supply of energy of the Contracting State maintaining the restriction as compared to the proportion prevailing in the most recent 36-month period of data are available prior to the imposition of the restriction, or in such other representative period on which the Contracting States agree;

(ii) the Contracting State does not impose a higher price for exports of energy to that other Contracting Party than the tariff charged for such energy when consumed domestically, by means of any measure such as licenses, fees, taxation and minimum tariff requirements. The forgoing provision does not apply to a higher tariff that may result from a restriction taken pursuant to subparagraph (i) that only restrict the volume of energy exports; and

(iii) the restriction does not require the disruption of normal channels of supply to that other Contracting State or normal proportions among energy supplied to that other Contracting State.

Article 6: Energy Regulatory Measures

1. The Contracting States recognize that energy regulatory measures are subject to the disciplines of:

   a. national treatment;
   b. import and export restrictions, as provided in Article 3; and
   c. export taxes, as provided in Article 4.

2. Each Contracting State shall seek to ensure that in the application of any energy regulatory measure, energy regulatory bodies within its Contracting State avoid disruption of contractual relationships to the maximum extent practicable, and provide for orderly and equitable implementation appropriate to such measures.

Article 7 National Security Measures

No Contracting State may adopt or maintain a measure restricting imports of energy from, or exports of energy to, another Contracting State under Article XXI of the GATT, except to the extent necessary to:

a. supply a military establishment of a Contracting State or enable fulfillment of a critical defense contract of a Contracting State;
b. respond to a situation of armed conflict involving the Contracting State taking the measure;
c. implement national policies or international agreements relating to the nonproliferation of nuclear weapons or other nuclear explosive devices; or
d. respond to direct threats of disruption in the supply of nuclear materials for defense purposes.

Article 8 Miscellaneous Provision

The Contracting States agree to allow existing or future incentives for oil and gas exploration, development and related activities in order to maintain the reserve base for these energy resources.

Section 3 Examples of Establishing Regional Electricity Markets

In establishing electricity markets in other regions, participating countries recognized at the outset there was a need to clearly define what might eventually constitute a regional electricity market in view of the many potential export, import, and transit activities for national power markets and a regional cross-border power market. Accordingly, various design options for phasing-in the development of regional power markets have been considered, typically starting with a "loose" pool of electricity trade based on exchanges of surplus power and subsequently developing a regional market that is superimposed on national markets with a regional regulator, a regional system operator, and regional spot and long-term cross-border power tariffs. The basic choice is between having a single regional balancing market and a single regional transmission system operator versus having national market agents that transact with counterparts and national transmission system operators, with each handling their own balancing market.[36] These choices can be characterized by the following four options:

- **Option 1:** Creation of a single regional market with one regional ISO and multiple national transmission companies;
- **Option 2:** Establishment of five or six national markets within the region, each with corresponding ISOs and Transmission System Operators (TSOs) that are interconnected for cross-border power exchanges and trade;
- **Option 3:** Formation of standard short-form bilateral agreements for power export/import/transit among neighboring countries, based on a regional directive;
- **Option 4:** Formation of comprehensive, inter-locking agreements, including an inter-governmental memorandum of understanding, inter-utility agreement, operating guidelines, short-term trading rules.

Independent of the organizational form a regional electricity market adopts, there are three essential functions that allow an electricity market to operate:

1. *Physical operation*, responsible for the grid operation in terms of reliability and stability;
2. *Economic operation*, whose purpose is to manage energy markets and supplying the system demand at minimum cost; and
3. C*ommercial operation*, which, as a result of the two other functions, provides for settlements and reconciling the obligations, contracted in the regional market.[37]

Volume II of this report consists of **Annexes 2-5**, which are exemplary agreements that address these three essential functions. They were used to develop regional electricity markets in Central America, South Africa, and South East Europe and have been adapted for prospective participants in a regional electricity market for South Asia.

3.1 Central America

Annex 2 is an exemplary treaty based on the agreement entered into by countries in Central America to create a regional energy market; it was previously provided in SARI/Energy's

36 "Southeastern Europe Electrical System Technical Support Project: Regional Electricity Market – Needs Assessment Report", SEETEC Consortium (February 2002).

37 See "Application of the Power Exchange – Independent System Operator Model in Chile", Watts, Atienza and Rudnick, Fondecyt Project (2002).

"The Four Borders Report: Reliability Improvement and Power Transfer in South Asia" (October 2001).

3.2 Southern Africa

Annex 3 includes adapted versions of inter-governmental agreements based on the Power Exchange Agreement between Nepal and India and the Inter-Governmental Memorandum of Understanding that served as the basis for forming the South African Power Pool (SAPP).

Annex 4 includes adaptations of the additional hierarchy of more detailed inter-utility agreements for SAPP, as provided in SARI/Energy's "Toolkit for Power Trading – Compendium of Bulk Power Purchase and Transmission Agreements" (October 2002).

3.3 South East Europe

For the past several years, USAID has supported technical assistance, partnerships, and training to establish regional electricity markets in several areas of the world, including in the Baltics and Southeast Europe. One partnership is between the U.S. National Association of Regulatory Utility Commissioners and the Energy Regulators Regional Association (ERRA), comprised of 17 energy regulatory groups in Europe and Eurasia. This partnership is a means of developing an efficient regional and sub-regional electricity market to facilitate private investment and trade by creating sound energy regulatory frameworks and competitive power markets.

The benefits of undertaking this process for establishing a regional electricity market in South East Europe reflect the benefits that would be available in South Asia, including:

- Increased reliability in electricity supply;
- Lower operating costs;
- Reduced needs for additional capacity investments, especially in generation;
- Opening of opportunities for private investments in infrastructure;
- Vastly improved opportunities for intra-and interregional trade, including peak load by hydro producers in the region; and
- Lower prices for the end consumers.

At the same time, the considerable challenges that had to be overcome in South East Europe in making the transition to a regional market would similarly be faced in South Asia:

- Adoption of new laws and regulations;
- Setting up independent regulatory agencies;
- Training of human resources;
- Introduction of new business concepts and practices;
- Possible closing down of uneconomic generation facilities; and
- Protection of poorest customers.

In September 1999, all of the countries in South East Europe agreed to the Thessaloniki Declaration that established principles for a future electricity market. In 2002, the prime ministers of the Baltic countries endorsed establishing a regional electricity market on or before year 2005 by each country establishing separate TSOs, Independent Regulatory Authorities, and Distribution System Operators. A 15-point plan was prepared that included design of a modern tele-information system among the national dispatch centers and prepared a needs assessment report for a regional transmission study that would identify bottlenecks to bulk power in the region and define priority investments in high-voltage transmission lines to facilitate trade and increase security and reliability.

The political process was initiated by the signing of the First Athens Memorandum of Understanding and, in December 2003, the Second Athens Memorandum of Understanding (MOU) committing the signatories to creating a regional energy market that would be integrated with the European Union market by year 2005. The principle was established that the MOU would eventually be transformed into a legally binding international agreement. Initially, the MOU included only the electricity market, but the second MOU includes integration of markets for the distribution of natural gas. This process is being supported by the development of a standard market inter-TSO compensatory mechanism to facilitate cross-border power transactions. A governance structure was created composed of a Ministerial Council, a High Level Permanent Group, and a South East Europe Electricity Regulatory Forum that consists of three groups: the South East Europe Energy Regulators group, the South East Europe Transmission System Operators group, and a Market Facilitation group. **Annex 5** is an MOU for a regional electricity market for South Asia based on the Second Athens Memorandum of Understanding.

Appendix A South Asia Preferential Trade Agreement

AGREEMENT ON SAARC PREFERENTIAL TRADING ARRANGEMENT (SAPTA

PREAMBLE

The Government of the People's Republic of Bangladesh, the Kingdom of Bhutan, the Republic of India, the Republic of Maldives, the Kingdom of Nepal, the Islamic Republic of Pakistan and the Democratic Socialist Republic of Sri Lanka hereinafter referred to as "Contracting States",

Motivated by the commitment to promote regional cooperation for the benefit of their peoples, in a spirit of mutual accommodation, with full respect for the principles of sovereign equality, independence and territorial integrity of all States;

Aware that the expansion of trade could act as a powerful stimulus to the development of their national economies, by expanding investment and production, thus providing greater opportunities of employment and help securing higher living standards for their population;

Convinced of the need to establish and promote regional preferential trading arrangement for strengthening intraregional economic cooperation and the development of national economies; Bearing in mind the urgent need to promote the intraregional trade which presently constitutes a negligible share in the total volume of the South Asian trade;

Recalling the direction given at the Fourth SAARC Summit meeting held in Islamabad in December 1988 that specific areas be identified where economic cooperation might be feasible immediately;

Guided by the declared commitment of the Heads of State or Government of the Member Countries at the Sixth SAARC Summit held in Colombo in December 1991 to the liberalisation of trade in the region through a step by step approach in such a manner that countries in the region share the benefits of trade expansion equitably;

Cognizant of the mandate given by the Sixth SAARC Summit in Colombo to formulate and seek agreement on an institutional framework under which specific measures for trade liberalisation among SAARC Member States could be furthered and to examine the Sri Lankan proposal to establish the SAARC Preferential Trading Arrangement (SAPTA) by 1997;

Recognising that a preferential trading arrangement is the first step towards higher levels of trade and economic cooperation in the region,

Have agreed as follows:

Article 1

Definitions

For the purpose of this Agreement:

(1) "Least Developed Country" means a country designated as such by the United Nations.

(2) "Contracting State" means any Member State of the South Asian Association for Regional Cooperation (SAARC) which has entered into this Agreement.

(3) "Serious injury" means significant damage to domestic producers, of like or similar products resulting from a substantial increase of preferential imports in situations which cause substantial losses in terms of earnings, production or employment unsustainable in the short term. The examination of the impact on the domestic industry concerned shall also include an evaluation of other relevant eco-

nomic factors and indices having a bearing on the state of the domestic industry of that product.

(4) "Threat of serious injury" means a situation in which a substantial increase of preferential imports is of a nature to cause "serious injury" to domestic producers, and that such injury, although not yet existing, is clearly imminent. A determination of threat of serious injury shall be based on facts and not on mere allegation, conjecture, or remote or hypothetical possibility.

(5) "Critical circumstances" means the emergence of an exceptional situation where massive preferential imports are causing or threatening to cause "serious injury" difficult to repair and which calls for immediate action.

(6) "Sectoral basis" means agreements amongst Contracting States regarding the removal or reduction of tariff, nontariff and paratariff barriers as well as other trade promotion or cooperative measures for specified products or groups of products closely related in enduse or in production.

(7) "Direct trade measures" means measures conducive to promoting mutual trade of Contracting States such as long and mediumterm contracts containing import and supply commitments in respect of specific products, buyback arrangements, state trading operations, and government and public procurement.

(8) "Tariffs" means customs duties included in the national tariff schedules of the Contracting States.

(9) "Paratariffs" means border charges and fees, other than "tariffs", on foreign trade transactions of a tarifflike effect which are levied solely on imports, but not those indirect taxes and charges, which are levied in the same manner on like domestic products. Import charges corresponding to specific services rendered are not considered as paratariff measures.

(10) "Nontariffs" means any measure, regulation, or practice, other than "tariffs" and "paratariffs", the effect of which is to restrict imports, or to significantly distort trade.

(11) "Products" means all products including manufactures and commodities in their raw, semiprocessed and processed forms.

Article 2
Establishment and Aims

1. By the present Agreement, the Contracting States establish the SAARC Preferential Trading Arrangement (SAPTA) to promote and sustain mutual trade and the economic cooperation among the Contracting States, through exchanging concessions in accordance with this Agreement.

2. SAPTA will be governed by the provisions of this Agreement and also by the rules, regulations, decisions, understandings and protocols to be agreed upon within its framework by the Contracting States.

Article 3
Principles

SAPTA shall be governed in accordance with the following principles

(a) SAPTA shall be based and applied on the principles of overall reciprocity and mutuality of advantages in such a way as to benefit equitably all Contracting States, taking into account their respective levels of economic and industrial development, the pattern of their external trade, trade and tariff policies and systems;

(b) SAPTA shall be negotiated step by step, improved and extended in successive stages with periodic reviews;

(c) The special needs of the Least Developed Contracting States shall be clearly recognised and concrete preferential measures in their favour should be agreed upon;

(d) SAPTA shall include all products, manufactures and commodities in their raw, semiprocessed and processed forms.

Article 4
Components

SAPTA may, interalia, consist of arrangements relating to:

(a) tariffs;

(b) paratariffs

(c) nontariff measures;

(d) direct trade measures.

Article 5
Negotiations

1. The Contracting States may conduct their negotiations for trade liberalisation in accordance with any or a combination of the following approaches and procedures:

(a) Product by product basis;

(b) Across the board tariff reductions;

(c) Sectoral basis;

(d) Direct trade measures.

2. Contracting States agreed to negotiate tariff preferences initially on a productbyproduct basis.

3. The Contracting States shall enter into negotiations from time to time with a view to further expanding SAPTA and the fuller attainment of its aims.

Article 6
Additional Measures

1. Contracting States agree to consider, in addition to the measures set out in Article 4, the adoption of trade facilitation and other measures to support and complement SAPTA to mutual benefit.

2. Special consideration shall be given by Contracting States to requests from Least Developed Contracting States for technical assistance and cooperation arrangements designed to assist them in expanding their trade with other Contracting States and in taking advantage of the potential benefits of SAPTA. The possible areas for such technical assistance and cooperation are listed in Annex I.

Article 7
Schedules of Concessions

The tariff, paratariff and nontariff concessions negotiated and exchanged amongst Contracting States shall be incorporated in the National Schedules of Concessions. The initial concessions agreed to by the Contracting States are attached as Annex II.

Article 8
Extension of Negotiated Concessions

The concessions agreed to under SAPTA, except those made exclusively to the Least Developed Contracting States in pursuance of Article 10 of this Agreement, shall be extended unconditionally to all Contracting States.

Article 9
Committee of Participants

A Committee of Participants, hereinafter referred to as the Committee, consisting of representatives of Contracting States, is hereby established. The Committee shall meet at least once a year to review the progress made in the implementation of this Agreement and to ensure that benefits of trade expansion emanating from this Agreement accrue to all Contracting States equitably. The Committee shall also accord adequate opportunities for consultation on representations made by any Contracting State with respect to any matter affecting the implementation of the Agreement. The Committee shall adopt appropriate measures for settling such representations. The Committee shall determine its own rules of procedures.

Article 10
Special Treatment for the Least Developed Contracting States

1. In addition to other provisions of this Agreement, all Contracting States shall provide, wherever possible, special and more favourable treatment exclusively to the Least Developed Contracting States as set out in the following subparagraphs:

(a) Duty-free access, exclusive tariff preferences or deeper tariff preferences for the export products,

(b) The removal of nontariff barriers,

(c) The removal, where appropriate, of paratariff barriers,

(d) The negotiations of longterm contracts with a view to assisting Least Developed Contracting States to achieve reasonable levels of sustainable exports of their products,

(e) Special consideration of exports from Least Developed Contracting States in the application of safeguard measures,

(f) Greater flexibility in the introduction and continuance of quantitative or other restrictions provisionally and without discrimination in critical circumstances by the Least Developed Contracting States on imports from other Contracting States.

Article 11
Nonapplication

Notwithstanding the measures as set out in Articles 4 and 6, the provisions of this Agreement shall not apply in relation to preferences already granted or to be granted by any Contracting State to other Contracting States outside the framework of this Agreement, and to third countries through bilateral, plurilateral and multilateral trade agreements, and similar arrangements. The Contracting States shall also not be obliged to grant preferences in SAPTA which impair the concession extended under those agreements.

Article 12
Communication, Transport and Transit

Contracting States agree to undertake appropriate steps and measures for developing and improving communication system, transport infrastructure and transit facilities for accelerating the growth of trade within the region.

Article 13
Balance of Payments Measures

1. Notwithstanding the provisions of this Agreement, any Contracting State facing serious economic problems including balance of payments difficulties may suspend provisionally the concessions as to the quantity and value of merchandise permitted to be imported under the Agreement. When such action has taken place, the Contracting State which initiates such action, shall simultaneously notify the other Contracting States and the Committee.

2. Any Contracting State which takes action according to paragraph 1 of this Article shall afford, upon request from any other Contracting State, adequate opportunities for consultations with a view to preserving

the stability of the concessions negotiated under the SAPTA. If no satisfactory adjustment is effected between the Contracting States concerned within 90 days of such notification, the matter may be referred to the Committee for review.

Article 14
Safeguard Measures

If any product, which is a subject of a concession with respect to a preference under this Agreement, is imported into the territory of a Contracting State in such a manner or in such quantities as to cause or threaten to cause, serious injury in the importing Contracting State, the importing Contracting State concerned may, with prior consultations, except in critical circumstances, suspend provisionally without discrimination, the concession accorded under the Agreement. When such action has taken place the Contracting State which initiates such action shall simultaneously notify the other Contracting State(s) concerned and the Committee shall enter into consultations with the concerned Contracting State and endeavour to reach mutually acceptable agreement to remedy the situation. In the event of the failure of the Contracting States to resolve the issue within 90 days of the receipt of original notification, the Committee of Participants shall meet within 30 days to review the situation and try to settle the issue amicably. Should the consultations in the Committee of Participants fail to resolve the issue within 60 days, the parties affected by such action shall have the right to withdraw equivalent concession(s) or other obligation(s) which the Committee does not disapprove of.

Article 15
Maintenance of the Value of Concessions

Any of the concessions agreed upon under this Agreement shall not be diminished or nullified, by the application of any measures restricting trade by the Contracting States except under the provisions as spelt out in other Articles of this Agreement.

Article 16
Rules of Origin

Products contained in the National Schedules of Concessions annexed to this Agreement shall be eligible for preferential treatment if they satisfy the rules of origin, including special rules of origin, in respect of the Least Developed Contracting States, which are set out in Annex III.

Article 17
Modification and Withdrawal of Concessions

1. Any Contracting State may, after a period of three years from the day the concession was extended, notify the Committee of its intention to modify or withdraw any concession included in its appropriate schedule.

2. The Contracting State intending to withdraw or modify a concession shall enter into consultation and/or negotiations, with a view to reaching agreement on any necessary and appropriate compensation, with Contracting States with which such concession was initially negotiated and with any other Contracting States that have a principal or substantial supplying interest as may be determined by the Committee.

3. Should no agreement be reached between the Contracting States concerned within six months of the receipt of notification and should the notifying Contracting State proceed with its modification or withdrawal of such concessions, the affected Contracting States as determined by the Committee may withdraw or modify equivalent concessions in their appropriate schedules. Any such modification or withdrawal shall be notified to the Committee.

Article 18
Withholding or Withdrawal of Concessions

A Contracting State shall at any time be free to withhold or to withdraw in whole or in part any item in its schedule of concessions in respect of which it determines that it was initially negotiated with a State

which has ceased to be a Contracting State in this Agreement. A Contracting State taking such action shall notify the Committee, and upon request, consult with Contracting States that have a substantial interest in the product concerned.

Article 19
Consultations

1. Each Contracting State shall accord sympathetic consideration to and shall afford adequate opportunity for consultations regarding such representations as may be made by another Contracting State with respect to any matter affecting the operation of this Agreement.

2. The Committee may, at the request of a Contracting State, consult with any Contracting State in respect of any matter for which it has not been possible to find a satisfactory solution through such consultation under paragraph 1 above.

Article 20
Settlement of Disputes

Any dispute that may arise among the Contracting States regarding the interpretation and application of the provisions of this Agreement or any instrument adopted within its framework shall be amicably settled by agreement between the parties concerned. In the event of failure to settle a dispute, it may be referred to the Committee by a party to the dispute. The Committee shall review the matter and make a recommendation thereon within 120 days from the date on which the dispute was submitted to it. The Committee shall adopt appropriate rules for this purpose.

Article 21
Withdrawal from SAPTA

1. Any Contracting State may withdraw from this Agreement at any time after its entry into force. Such withdrawal shall be effective six months from the day on which written notice thereof is received by the SAARC Secretariat, the depositary of this Agreement. That Contracting State shall simultaneously inform the Committee of the action it has taken.

2. The rights and obligations of a Contracting State which has withdrawn from this Agreement shall cease to apply as of that effective date.

3. Following the withdrawal by any Contracting State, the Committee shall meet within 30 days to consider action subsequent to withdrawal.

Article 22
Entry into Force

This Agreement shall enter into force on the thirtieth day after the notification issued by the SAARC Secretariat regarding completion of the formalities by all Contracting States.

Article 23
Reservations

This Agreement may not be signed with reservations nor shall reservations be admitted at the time of notification to the SAARC Secretariat of the completion of formalities.

Article 24
Amendments

This Agreement may be modified through amendments to this Agreement. All amendments shall become effective upon acceptance by all Contracting States.

Article 25
Depositary

This Agreement shall be deposited with the Secretary General of SAARC who shall promptly furnish a certified copy thereof to each Contracting State.

IN WITNESS WHEREOF the undersigned being duly authorized thereto by their respective Governments have signed this Agreement on the SAARC Preferential Trading Arrangement.

Done at DHAKA this ELEVENTH day of APRIL One Thousand Nine Hundred Ninety Three in eight originals in the English language.

A.S.M. MOSTAFIZUR RAHMAN
Minister of Foreign Affairs
People's Republic of Bangladesh

FATHULLA JAMEEL
Minister of Foreign Affairs
Republic of Maldives

DAWA TSERING
Minister of Foreign Affairs
Kingdom of Bhutan

MAHESH ACHARYA
State Minister of Finance
His Majesty's Government of Nepal

DINESH SINGH
Minister of External Affairs
Republic of India

MOHAMMAD SIDDIQUE KHAN KANJU
Minister of State for Foreign Affairs
Islamic Republic of Pakistan

HAROLD HEART
Minister of Foreign Affairs
Democratic Socialist Republic of Sri Lanka

Annex I

ADDITIONAL MEASURES IN FAVOUR OF LEAST DEVELOPED CONTRACTING STATES

(a) The identification, preparation and establishment of industrial and agricultural projects in the territories of Least Developed Contracting States which could provide the production base for the expansion of exports of Least Developed Contracting States to other Contracting States, possibly linked to cooperative financing and buyback arrangements;

(b) the setting up of manufacturing and other facilities in Least Developed Contracting States to meet intra-regional demand under cooperative arrangements;

(c) the formulation of export promotion policies and the establishment of training facilities in the field of trade to assist Least Developed Contracting States in expanding their exports and in maximising their benefits from SAPTA;

(d) the provision of support to export marketing of products of Least Developed Contracting States by enabling these countries to share existing facilities (for example, with respect to export credit insurance, access to market information) and by institutional and other positive measures to facilitate imports from Least Developed Contracting States into their own markets;

(e) bringing together of enterprises in other Contracting States with project sponsors in the Least Developed Contracting States (both public and private) with a view to promoting joint ventures in projects designed to lead to the expansion of trade;

(f) the provision of special facilities and rates in respect to shipping.

Annex II

National Schedules of Concessions

(circulated separately)

Annex III

RULES OF ORIGIN

RULE 1: Originating products - Products covered by preferential trading arrangements within the framework of the SAPTA imported into the territory of a Contracting State from another Contracting State which are consigned directly within the meaning of Rule 5 hereof, shall be eligible for preferential concessions if they conform to the origin requirement under any one of the following conditions:

(a) Products wholly produced or obtained in the exporting Contracting State as defined in Rule 2; or

(b) Products not wholly produced or obtained in the exporting Contracting State, provided that the said products are eligible under Rule 3 or Rule 4.

RULE 2: Wholly produced or obtained - Within the meaning of Rule 1 (a) the following shall be considered as wholly produced or obtained in the exporting Contracting State:

(a) raw or mineral products extracted from its soil, its water or its seabeds:[1]
(b) agricultural products harvested there;[2]
(c) animals born and raised there;
(d) products obtained from animals referred to in paragraph (c) above;
(e) products obtained by hunting or fishing conducted there;
(f) products of sea fishing and other marine products taken from the high seas by its vessels;[3/4]
(g) products processed and/or made on boards its factory ships [4/5] exclusively from products referred to in paragraph (f) above;
(h) used articles collected there, fit only for the recovery of raw materials;
(i) waste and scrap resulting from manufacturing operations conducted there;
(j) goods produced there exclusively from the products referred to in paragraph (a) to (i) above.

RULE 3 : **Not wholly produced or obtained**

(a) Within the meaning of Rule 1(b), products worked on or processed as a result of which the total value of the materials, parts or produce originating from nonContracting States or of undetermined origin used does not exceed 50 per cent of the f.o.b. value of the products produced or obtained and the final process of manufacture is performed within the territory of the exporting Contracting State shall be eligible for preferential concessions subject to the provisions of Rule 3(c) and Rule 4.
(b) Sectoral agreements [6]
(c) The value of the nonoriginating materials, parts or produce shall be:
    (i) The c.i.f. value at the time of importation of materials parts or produce where this can be proven: or
    (ii) The earliest ascertainable price paid for the materials, prices or produce of undetermined origin in the territory of the Contracting State where the working or processing takes place.

RULE 4: Cumulative rules of origin - Products which comply with origin requirements provided for in Rule 1 and which are used by a Contracting State as input for a finished product eligible for preferential treatment by another Contracting State shall be considered as a product originating in the territory of the Contracting State where working or processing of the finished product has taken place provided that the aggregate content originating in the territory of the Contracting State is not less than 60 percent of its f.o.b. value[7].

RULE 5 : Direct consignment - The following shall be considered as directly consigned from the exporting Contracting State to the importing Contracting State:

(a) if the products are transported without passing through the territory of any non-Contracting State:

(b) the products whose transport involves transit through one or more intermediate nonContracting States with or without transhipment or temporary storage in such countries, provided that:

    (i) the transit entry is justified for geographical reason or by considerations related exclusively to transport requirements;

(ii) the products have not entered into trade or consumption there; and

(iii) the products have not undergone any operation there other than unloading and reloading or any operation required to keep them in good condition.

RULE 6: Treatment of packing - When determining the origin of products, packing should be considered as forming a whole with the product it contains. However, packing may be treated separately if the national legislation so required.

RULE 7: Certificate of Origin - Products eligible for preferential concessions shall be supported by a Certificate of Origin[8] issued by an authority designated by the government of the exporting Contracting State and notified to the other Contracting States in accordance with the Certification Procedures appearing on pages 15 and 16 of this Annex.

RULE 8:

(a) In conformity with Article 15 of the Agreement on SAPTA and national legislations, any Contracting State may prohibit importation of products containing any inputs originating from States with which it does not have economic and commercial relations.

(b) Contracting States will do their best to cooperate in order to specify origin of inputs in the Certificate of Origin.

RULE 9: Review - These Rules may be reviewed as and when necessary upon request of one-third of the Contracting States and may be open to such modifications as may be agreed upon.

RULE 10: Special criteria percentage- Products originating in Least Developed Contracting States can be allowed a favourable 10 percentage points applied to the percentage established in Rules 3 and 4. Thus, for Rule 3, the percentage would not exceed 60 per cent, and for Rule 4, the percentage would not be less than 50 per cent.

[1] Include mineral fuels, lubricants and related materials as well as mineral of metal ores.

[2] Include forestry products.

[3] "Vessels" shall refer to fishing vessels engaged in commercial fishing, registered in a Contracting State's country and operated by a citizen or citizens or governments of Contracting State or partnership, corporation or association, duly registered in such Contracting State's country, at cost 60 per cent of equity of which is owned by a citizen or citizens and/or government of such Contracting State or 75 percent by citizens and/or governments of the Contracting States. However, the products taken from vessels engaged in commercial fishing under bilateral agreements which provide for chartering/leasing of such vessels and/or sharing of catch between Contracting States will also be eligible for preferential concessions.

[4] In respect of vessels or factory ships operated by government agencies the requirement of flying the flag of a Contracting State does not apply.

[5] For the purpose of this Agreement, the term "factory ship" means any vessels, as defined, used for processing and/or making on board products exclusively from those products referred to in paragraph (f) above.

[6] In respect of products traded within the framework of sectoral agreements negotiated under SAPTA, provision may need to be made for special criteria to apply. Consideration may be given to these criteria as and when the sectoral agreements are negotiated.

[7] "Partial" cumulation as implied by Rule 4 above means that only products which have acquired originating status in the territory of one Contracting State may be taken into account when used as inputs for a finished product eligible for preferential treatment in the territory of another Contracting State.

[8] A standard Certificate of Origin to be used by all Contracting States is annexed and approved by the Contracting States.

ADDENDUM

Amendment to SAPTA Rules of Origin

The SAARC Council of Ministers at its Twenty-first Session held in Nuwara Eliya, Sri Lanka, on 18-19 March 1999, approved the amendments to the Rules 3(a), 4 and 10 relating to the Rules of Origin (Annex-II) of the SAARC Preferential Trading Arrangement (SAPTA) with immediate effect.

The new amended rules now read as follows:

Rule 3(a): Not wholly produced or obtained

Within the meaning of Rule 1(b), products worked on or processed as a result of which the total value of the materials, parts or produce originating from non-Contracting States or of undetermined origin used does not exceed 60 per cent of the f.o.b. value of the products produced or obtained and the final process of manufacture is performed within the territory of the exporting Contracting State shall be eligible for preferential concessions subject to the provisions of Rule 3(c) and Rule 4.

Rule 4: Cumulative rules of origin

Products which comply with origin requirements provided for in Rule 1 and which are used by a Contracting State as input for a finished product eligible for preferential treatment by another Contracting State shall be considered as a product originating in the territory of the Contracting State where working or processing of the finished product has taken place provided that the aggregate content originating in the territory of the Contracting State is not less than 50 percent of its f.o.b. value.

Rule 10: Special criteria percentage

Products originating in Least Developed Contracting States can be allowed a favourable 10 percentage points applied to the percentage established in Rules 3 and 4. Thus, for Rule 3, the percentage would not exceed 70 per cent, and for Rule 4, the percentage would not be less than 40 per cent.

CERTIFICATE OF ORIGIN

<table>
<tr><td colspan="3">1. Goods consigned from
(exporter's business name, address, country)

2. Goods consigned to
(Consignee's name, address, country)</td><td colspan="3">Reference No.
SAARC PREFERENTIAL TRADING ARRANGEMENT
(SAPTA)
(Combined declaration and certificate)

Issued in .....
(country)
see notes overleaf</td></tr>
<tr><td colspan="3">3. Means of Transport and route
(as far as known)</td><td colspan="3">4. For Official use</td></tr>
<tr><td>5. Tariff item number</td><td>6. Marks and numbers of packages</td><td>7. Number and kind of packages: description of goods</td><td>8. Origin Criterion (see notes overleaf)</td><td>9. Gross weight or other quantity</td><td>10. Number and date of invoices</td></tr>
<tr><td colspan="3">11. Declaration by the exporter:
The undersigned hereby declares that the above details and statements are correct: that all the goods were produced in

.....
(country)

and that they comply with the origin requirements specified for those goods in SAPTA for goods exported to

.....
(importing country)

.....
Place and date , signature of authorised signatory</td><td colspan="3">12. Certificate
It is hereby certified on the basis of control carried out, that the declaration by the exporter is correct

.....
Place and date, signature and stamp of Certifying authority</td></tr>
</table>

I. **General Conditions**

To qualify for preference, products must :

a) fall within a description of products eligible for preference in the schedule of concessions of SAPTA country of destination;
b) comply with SAPTA Rules of Origin. Each article in a consignment must qualify separately in its own right; and
c) comply with the consignment conditions specified by the SAPTA Rules of Origin. In general, products must be consigned directly within the meaning of Rule 5 hereof from the country of exportation to the country of destination.II.

II. **Entries to be made in Box 8**

Preference products must be wholly produced or obtained in the exporting Contracting State in accordance with Rule 2 of the SAPTA Rules of Origin, or where not wholly produced or obtained in the exporting Contracting States must be eligible under Rule 3 or Rule 4.

a) Products wholly produced or obtained; enter the letter "A" in Box 8.

b) Products not wholly produced or obtained: the entry in Box 8 should be as follows :

1. Enter letter "B" in Box 8, for products which meet the origin criteria according to Rule 3. Entry of letter would be followed by the sum of the value of materials, parts or produce originating from nonContracting States, or undetermined origin used, expressed as a percentage of the f.o.b. value of the products; (example "B" 50 per cent);

2. Enter letter "C" in Box 8 for products which meet the origin criteria according to Rule 4. Entry of letter "C" would be followed by the sum of the aggregate content originating in the territory of the exporting Contracting State expressed as a percentage of the f.o.b. value of the exported product; (example "C" 60 per cent);

3. Enter letter "D" in Box 8 for products which meet the special origin criteria according to Rule 10.